

# Spindle ball bearing HY SM 61907 C TXM P4+ 16.07.2024



## Components

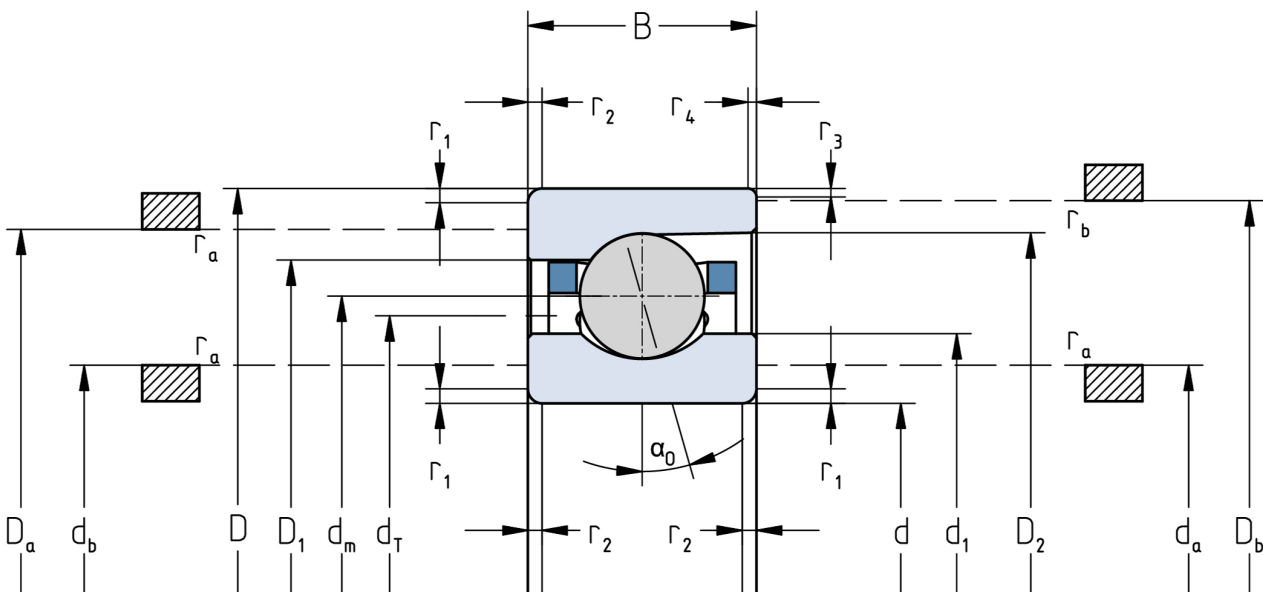
|                              |                      |
|------------------------------|----------------------|
| Bearing designation:         | HY SM 61907 C<br>TXM |
| Bearing design:              | SM                   |
| Series / size:               | 61907                |
| Ball material:               | Ceramic              |
| Cage:                        | TXM                  |
| Precision:                   | P4+                  |
| Main dimensions [d x D x B]: | 35 x 55 x 10 mm      |

## Load data

|                       |                            |
|-----------------------|----------------------------|
| Static load capacity  | $C_{0r}$ : 4600 N          |
| Dynamic load capacity | $C_r$ : 8000 N             |
| Fatigue load limit    | $C_U$ : 173 N              |
| Speed limit           | $n_{grease}$ : 42000 1/min |
| Speed limit           | $n_{oil}$ : 56000 1/min    |
| Light preload         | L: 40 N                    |
| Axial rigidity        | $C_{ax}$ : 37 N/ $\mu$ m   |
| Medium preload        | M: 120 N                   |
| Axial rigidity        | $C_{ax}$ : 56 N/ $\mu$ m   |
| Heavy preload         | S: 240 N                   |
| Axial rigidity        | $C_{ax}$ : 75 N/ $\mu$ m   |
| Spring preload        | Ff: 220 N (for $n_{max}$ ) |

## Geometrical Data

|  |                        |  |                         |
|--|------------------------|--|-------------------------|
| Bore diameter                            | d: 35 mm               | Oiling nozzle position                       | $d_T$ : 43.3 mm         |
| Outer diameter                           | D: 55 mm               | Pitch circle diameter                        | $d_m$ : 45 mm           |
| Width of single bearing                  | B: 10 mm               | Inner diameter of outer ring                 | $D_1$ : 48.6 mm         |
| Ball diameter                            | $D_w$ : 5.556 mm       | Undercut of associated component             | $r_{a max}$ : 0.6 mm    |
| Number of balls                          | Z: 18                  | Undercut of associated component (open side) | $r_{b max}$ : 0.3 mm    |
| Chamfer (min)                            | $r_{1,2 min}$ : 0.6 mm | Abutment diameter inner ring                 | $d_{a,b min}$ : 38.2 mm |
| Chamfer (min), open side                 | $r_{3,4 min}$ : 0.3 mm | Abutment diameter outer ring                 | $D_{a,b max}$ : 52.3 mm |
| Outer diameter of inner ring             | $d_1$ : 41.4 mm        | Inner diameter of outer ring (open side)     | $D_2$ : 50.6 mm         |
| Outer diameter of inner ring (open side) | $d_2$ : -              | Bearing weight                               | m: 0.065 kg             |
|  |                        | Contact angle                                | Alpha 0: 17°            |



The given speed limits apply to individual bearings with spring preload. Correction factors must be considered for all properties which deviate from this.